

THE LEISURE HOUR

A FAMILY JOURNAL OF INSTRUCTION AND RECREATION.

"REHOLD IN THESE WHAT LEISURE HOURS DEMAND,—AMUSEMENT AND TRUE KNOWLEDGE HAND IN HAND."—*Cooper*



MARY TALBOT MEETS WITH A SAFE ESCORT.

THE MORTONS OF MORTON HALL.

CHAPTER XXIII.—SOMETHING COMES OF VISITING THE SICK, WHICH THE FOLLOWING CHAPTER WILL EXPLAIN.

NEARLY a month had elapsed since the arrival of the American packet, and another mail was nearly due. Throughout this period the estrangement between Mary Talbot and Mr. Aston had continued unchanged. The latter visited the schools as usual, and was distantly polite whenever he and Mary met. To others, perhaps, the alteration in his manner towards the young governess might not have been remarked; but to Mary her-

self it was apparent in every look and gesture, while it was equally apparent to her that his manner and conversation were constrained, that he was ill at ease with himself, and that he would gladly have come to an explanation with her.

Mary, however, felt that it was from himself, and not from her, that the first step towards an explanation, and perhaps to a reconciliation, was due. Her youth, her sex, and her comparatively humble position, alike precluded her from making the advance movement, and so the estrangement continued.

Mary would perhaps have felt it more keenly, than

she did—unconscious as she was of any fault on her part—had not her mind been almost entirely occupied with her anxieties respecting her brother. No news of the loss of the *Amazon* had as yet reached the secluded village, except that received by Mr. Aston by the previous mail-packet; and as he had refrained from breaking the sad intelligence to her who was most deeply interested in it, by consequence of the unexpected discovery he had made on the occasion of his visit to the farmhouse, he had thought it best, for the present, to conceal his knowledge of the sad fate of the ship from his friends at St. David.

The dark foreboding of coming evil already alluded to still oppressed Mary's spirits. She awaited the arrival of the next American packet with an indescribable longing, and at the same time with a dread anxiety that seriously affected her health; that prevented her from sleeping at night, or troubled her slumbers with frightful dreams; and that also prevented her from resting in quietude for a moment during the day—that was, in fact, painfully visible in her every action. This it was that caused the look of pity and compassion with which she so frequently caught Mr. Aston regarding her when he fancied himself unnoticed. It was painful to him to witness her anxiety, and more painful still to watch the bright light gleam from her eyes when sometimes, though rarely, her compassionate friends would succeed in bringing her to hope that the next packet would bring the long-looked-for letter from Henry, and that all her anxieties would be removed—believing, as he did, that that hope would never be realised.

One afternoon towards the end of the month, Mary Talbot set forth, after the schools had been dismissed for the day, to visit a little girl who had become a great favourite with her on account of her quickness of intellect and gentle disposition, as well as her interesting features. The little girl, who was an orphan, and who lived with her aged grandmother in a cottage standing at a considerable distance from the village, had suffered from an illness which had brought her almost to death's door; but a change for the better had lately taken place, and at length Doctor Pendriggen had declared her to be in a state of convalescence. Mary had frequently visited the cottage when the little sufferer was unable to recognise her; and now, with almost her first effort of returning consciousness, the child had expressed an earnest desire to see her. The aged grandmother had walked to the village expressly to deliver the poor child's message, and Mary had immediately promised to pay the desired visit.

It had been one of those fresh and breezy days in early spring, when brilliant flashes of sunlight alternate with deep shadow, making of every landscape a succession of pictures; and when Mary set out, the approaching sunset added to the beauty of earth and sky. The road led along the cliffs, whence, on one hand, she saw the broad blue sea far beneath her feet, heaving heavily, and heard the billows break in sullen roar against the rocks; while, on the other hand, the view extended for many a mile across the country, affording a prospect of fertile fields and dark woods, bounded in the far distance by the shadowy outlines of the Welsh mountains.

The fast-fitting clouds, the breezy grass, the rustling of the wind amidst the young spring foliage, and the foam-crested waves, all were emblems of busy life. There was alike motion, and sound, and conflict; and, for the time being, the gloomy forebodings that had so long oppressed her spirits gave way to feelings of hope and trust.

"The dark winter," she thought, "has passed away, and given place to the hope and joy of spring. The dear child who was given over to death has escaped his cold embrace, and, if it please God, will live to requite the love and care of her aged grandmother. Cannot He who hath brought about these bright changes also change my sadness into joy? I will hope and trust that He will do so. At all events, I will not despair while hope remains; and if I have still greater sorrow to bear—if real trouble come upon me—I will trust in Him who is able to give me strength to endure to the end."

Thus reasoning hopefully, she walked on until she reached old Dame Hoolit's cottage, and was gladly welcomed by the old woman, who thanked her for coming, and at her own request at once led her into the little bedroom where the sick child lay.

As Mary passed through the kitchen into the bedroom adjoining, she saw that the old dame had been chatting with a neighbouring gossip, who was still seated near the fire; and it was to escape the weary chatter of the two old women that she had hastened so quickly to the child on her arrival.

She seated herself by the bed-side, kissed her little favourite, and made her happy with a little present she had brought with her, and then entered into conversation with the child, listening patiently to the little stories she had to tell relating to her illness, and answering her numerous questions about her school-fellows. Then, when she had gained the child's confidence, she talked of graver matters, and told her how grateful she ought to feel to God, who had preserved her through her long weary illness, and who would now, there was reason to hope, raise her up from her bed, to live to be a source of comfort and support to her grandmother's declining years. She read from the New Testament the records which tell how Christ raised the sick and dying to life and health, and became so interested in her talk with her favourite little pupil, that she scarcely heard a word of the conversation that was carried on in the adjoining room, though the door stood partly open; and, as both the old women were afflicted with deafness, they naturally conversed in loud and shrill, though somewhat cracked voices.

At length the child began to show symptoms of weariness, and Mary decided to sit quietly by her bed-side until she dropped to sleep, and then, as it was growing late, to return home immediately.

Now, however, the conversation in the outer room became distinctly audible, and presently caught the ear of the young governess, and arrested her earnest attention.

"A goold locket, do 'ee say? An' two hunner poun's i' money!" exclaimed Dame Hoolit, in a tone of wonder and astonishment. "An' a' stull from Muster Aston!" she went on. "Sure, neighbour, thes maun be mista'en? Us ud ha' heerd on't afore now."

"Na, Dame Hoolit," replied the neighbour. "It bean't na mista'ke o' moine, aw tell 'ee. 'Ta' bin kep' secret; but thou knows as moy darter-i'-laa weer one o' ta' nurses oop to Cliff Cottage when Muster Aston weer ill, an' her weer i' th' room wi' Rector an' Doctor Pendriggen when Muster Aston tell't her to bring un his pocket-book from his coat i' th' wardrobe, an' doctor he gi'n her t' key. But t' pocket-book weer gone, an' Muster Aston tuk on terr'ble for a bit. Then Polly weer sent out o' t' room, an', arter a while, his reverence an' doctor came away, and doctor tow'd Polly as Muster Aston knaw'd weer he'd lost his pocket-book, an' t' weer na great matter. But Polly her knaw'd

more nor doctor tell't her. Her had listened at t' key-hole, an' her heerd a' as was said, an' Muster Aston tow'd how t' pocket-book maun ha' been ta'en by t' fisher-lads, a' toime when un had a fit on t' beach. An' they weer afeared as a' weer lost. An' Muster Aston, he wadna ha' ony fuss made about it, 'case he weer afeard t' wrong folk might be suspekkit."

"An' it ha' ben kep' secret a' this toime, neighbour?"

"Ay, dame. An' tha' maun na say ought about whatten aw ha' tell't 'ee. Polly 'd happen git i' trouble her sen, i' 'tweer knawed as her weer a listenin'. Her never tell't nought o't till t'other day, and then her said it maun go na furdur."

"An do'ee think t' fisher lads stull th' pocket-book, thysen, neighbour?" inquired Dame Hoolit.

"Happen 'tweer, an' happen 'tweer na," replied the old gossip. "Aw knaw's nowt about it. Happen 'tweer na stull at a'. An then tha' knaws theer weer other folk beside t' fisher lads as weer 'long wi' Muster Aston on t' beach."

Dame Hoolit must have cautioned her companion against speaking so loud at this point, for the conversation was continued as though the two old women were whispering in each other's ears, and the only words that were subsequently audible came from Dame Hoolit, who replied to some remark of her companion—

"Ay, tha' may trust me, neighbour. Aw's owd enow to keep a still tongue i' my head."

Mary, however, had heard enough, had heard far too much for her own peace of mind. Under other circumstances she would have believed that she had listened to a piece of idle village gossip. Indeed, under other circumstances, she would not have remained to listen, for the little girl had long since fallen asleep, and ere now she would have been far on her journey homeward. But now she felt—she *knew*—the story she had heard was true; and what a terrible explanation it afforded to the mystery that had surrounded Mr. Aston's estranged behaviour towards herself!

All now was clear enough. He had recognised the locket that evening when he visited her at her lodgings, and had naturally questioned her as to the manner in which it had come into her possession.

"But," she asked herself, "is it possible that Henry is guilty of so base a crime?" and her heart responded, "No, he is innocent. There is some dreadful mystery yet to be explained. It cannot be. It is impossible that Henry can be guilty."

She still sat at the bed-side, gazing at the sleeping child; but a feeling of faintness came over her, and she gasped for fresh air. Rising from her seat, she stood for a few moments to gather strength, for her tottering limbs seemed scarcely able to support her weight; and then she silently passed from the bed-room into the kitchen in which the two old gossips were seated.

"Art 'ee goin' whoam, miss?" said Dame Hoolit. "It do be getting lāate for sure, an' tha' has a long ways to go. Wun't 'ee stop an' tāake a coop o' tea? 'Tis na for sich as we to arx 'ee; but if 'ee wull, aw'll git it ready directly?"

Mary declined the offered refreshment, much as she really needed it. She wished to escape from the cottage, and think over what she had heard; and after the old dame had thanked her for the visit, and she had promised to call again soon, she was permitted to leave without further question.

It was already beginning to grow dark when she staggered, rather than walked, forth from the cottage; but she felt the cool fresh air of the evening revive her, and

hastened to cross the road into the fields, where she would be silent and alone, with nothing to interrupt the current of her thoughts. Her mind was in a state of utter confusion; and as soon as she reached the fields she rested on a low stile, and sought to recollect all that had passed between herself and Henry, at the time when he had given her the locket, and all that had occurred between herself and Mr. Aston on the evening when the latter had visited the farm-house.

She shuddered as by degrees her memory became clear, and she gradually recalled to mind the whole of the circumstances that had occurred, from the moment when her brother, flushed and excited, had rushed into the schoolroom where she had been seated, and had told her of Mr. Aston's sudden illness, until the evening when Mr. Aston himself had turned from her and quitted her room without even wishing her good night.

She would not even now believe in her brother's guilt; yet her own conscience accused him, in spite of herself. The very evidence it brought forward to prove his innocence, turned against him.

Ah! how different were her feelings from what they had been but a short hour before! The hope and trust that had then lightened her bosom of its anxieties had fled, and left nothing in their stead but doubt and dark despair.

The dark forebodings which had oppressed her spirits since her brother's departure were no longer mere forebodings, but stern realities. Dreary and sad enough were her reveries as she sat on the low stile, while the shades of evening were fast gathering around her—typical of the gloom that had overshadowed her soul. Of all the bright hopes that had once stirred her heart there remained nothing but disappointment and dread; and ere she had well entered the threshold of life she had found her path strewn with thorns, and all before her dreary and desolate.

She remembered how her brother had been alone with Mr. Aston when he was struck down with sudden illness, and that he had hastened away, leaving the stricken man to the care of strangers, and had immediately quitted the village and gone to London, and had returned at the expiration of a week, bringing her a gift which resembled the trinket Mr. Aston had lost—at least, so far as she had heard—in every respect. Thus she recalled that, when he had produced the locket, he had told her that he had received as a loan from a friend, of whom she had never before heard him speak, two hundred pounds—the exact sum of money, and in the same form, as the amount which, as she had heard, Mr. Aston had had stolen from him on the beach.

"What am I thinking of? What suspicions am I daring to harbour?" she suddenly exclaimed aloud, starting up as if in terror from her seat. She started again at the sound of her own voice, and looked around her in alarm, as though she fancied some other voice had spoken, and then, gathering courage, she moved on. "In my heart I have dared to accuse my brother," she muttered to herself, as she walked along. "Others, who do not know him as I do may accuse him—have accused him; but I feel—I know that there is some sad mistake, and that poor Henry is innocent of crime."

It was nearly dark by the time Mary had arrived at these conclusions; but the moon had risen, and shed sufficient light to guide her along the path, which now, for a short distance, led through a deep wood. She was about to hasten her steps, not through bodily fear, for crime or outrage were almost utterly unknown at St. David, but she felt a desire to reach home, and arrange

her thoughts in the quietude of her own room, when she fancied that she heard some one brushing through the wood on her right. Now she did naturally feel some alarm, for she was quite alone, and there was not even a cottage within a quarter of a mile from the spot on which she stood. She stopped short and turned towards the spot where she heard the noise, now more distinctly, and evidently drawing nearer to her. Her fears vanished, however, when she perceived by the imperfect light that the intruder upon her solitary path was no other than Mr. Sharpe, the curate of the parish, who now came forth from the wood, and appeared to be as much surprised and startled as herself when he recognised her.

"I hope I have not alarmed you, Miss Talbot?" he said, as he came towards her. "I have been to visit Farmer Danesforth, whose wife is seriously ill, and, having stayed at the farm later than I intended, I struck through the wood to shorten the road home. But I confess," he added, "that I am surprised to meet you so far from the village at this late hour?"

"I also have been to visit the sick," replied Mary; and then she explained that she had stayed later than she intended at old Dame Hoolit's.

"Ah! poor little Susan is ill—I remember," replied the curate; "but I think Doctor Pendriggen told me yesterday that there was a change for the better," he added.

"She is much better, and is, I hope, in a fair way of recovery," said Mary; and then, as she and the curate walked on together, she inquired after Farmer Danesforth's wife and other sick persons in the village.

The young curate of St. David has hitherto figured but very slightly in this history. He was, as I have heretofore stated, a studious and somewhat bashful young man, who steadily and unobtrusively performed his appointed duties without attempting to assume a prominent position, and of whom, in consequence, I have had little to say.

Almost from the first day of Mary Talbot's arrival at St. David, however, she had been an object of interest to Mr. Sharpe. He had, of course, heard of her engagement from the rector, some weeks before she arrived; and perhaps the particular interest he had taken in the young lady might have had its origin in the discovery he had made, that she was very much superior to the majority of young persons who are willing to accept the humble position of a village school governess. Be this as it may, he had experienced a strange feeling of satisfaction when he discovered that she was descended from a good family, and was as well-informed and intelligent as she was prepossessing and lady-like in personal appearance. From that moment he did not hesitate to manifest, in his own quiet unobtrusive manner, the interest with which she had inspired him, and the regard and esteem in which he held her. Gradually, as in his frequent visits to the school-rooms, he became accustomed to converse with her, his natural reserve disappeared, and it was not long before his evident partiality became apparent to Mary herself.

Nevertheless, though the young governess was grateful for the interest he took in her, and perhaps flattered by his partiality, she had felt it her duty to hold herself aloof from him as much as possible, and had at length, in her turn, become silent and reserved in his society.

Mr. Sharpe, however, possessed an advantage in his privilege of visiting the schools at any time he chose. He was not disconcerted by her reserve. On the contrary, he appeared rather pleased with it than otherwise, and still continued his attentions towards her; and at

length, soon after Henry Talbot's departure for America, he seized an opportunity, when he and she had met, as they had now met, while returning from visiting the sick, to ask the young governess to share his fortunes and become his wife; and Mary, although she had not positively engaged herself to him, had confessed that he was not utterly indifferent to her. Again and again the curate had repeated his offer, and though Mary had not yet given him a decisive answer, and though their engagement—such as it was—was unknown to, and even unsuspected by, any others than themselves, they were now, in one sense, accepted lovers. Mary, however, had made some conditions, and declared that she would never become his wife until he was in such a position that his marriage with her would be no impediment to his future fortunes.

With this brief explanation of the position in which the young couple stood towards each other on the occasion of the meeting in the wood, above referred to, I will continue my story.

"You will permit me to accompany you as far as your lodging, Miss Talbot?" continued Mr. Sharpe; "for though I believe the people of St. David are too honest and simple-minded to commit robbery or outrage of any description, this is a lonely road for a young lady to pass over after nightfall;" and Mary, having accepted the young clergyman's escort, they passed onwards together.

"You do not seem well to-night," observed Mr. Sharpe, when, on emerging from the shadow of the wood, he remarked his companion's pale face and languid looks. "You are still anxious respecting your brother."

"I am anxious, though perhaps I am—I hope and trust I am—alarming myself without cause," replied Mary; "but—but my spirits—" and she broke down without completing the sentence.

The curate became alarmed.

"What is this, Miss Talbot—Mary?" he stammered forth. "You are really ill. What is to be done? We have yet a mile to walk, and I cannot leave you here in darkness while I go to seek assistance."

"There is no occasion. It is nothing," replied Mary. "My nerves are unstrung. The anxiety I have suffered since—since the arrival of the last American packet, has so affected me, that the least trifle now overpowers me. I feel better now. Let us walk on."

"You have walked too far, Miss Talbot, after the duties of the day; and the visit to the sick child has been too much for you."

As they walked on Mary was still thinking of the one absorbing subject. The curate, she had no doubt, was aware of all the particulars relative to the loss of Mr. Aston's pocket-book, and these she was most anxious to learn before she made up her mind what course she herself ought to pursue. She knew not how, unless from him, she could obtain the information she required.

"I feel much better," she went on, after a silence of a few minutes; "and perhaps you will smile at my folly when I tell you what trivial matters (such as the, perhaps, idle gossip of two old women) affect my nerves in my present state of anxiety. While I was sitting in the bedroom with little Susan Hoolit, I heard her grandmother and another old dame conversing respecting a robbery that has taken place in the village, but of which, until to-day, I have never heard a whisper, and it quite upset me. I wonder, if such a robbery actually occurred, that I have not heard something of it. You, no doubt, can tell me whether the old women spoke the truth, or whether they were indulging in idle village gossip."

"A robbery! Of what nature?" inquired the curate. "They said," continued Mary, hardly able to keep her voice from betraying her own especial interest in the matter, "that Mr. Aston has been robbed of his pocket-book, which contained money to the amount of two hundred pounds, and—and other valuables."

"It is true, I am sorry to say, Miss Talbot," replied Mr. Sharpe, "that Mr. Aston has lost, or has been robbed of, a pocket-book which contained the property you speak of. He firmly believes that it was taken from his coat-pocket on the day on which he was suddenly seized with illness on the beach. Mr. Sinclair, Doctor Pendriggen, and myself, however, doubt this. We suspect that he lost, or was robbed of his property during his visit to Falmouth, a day or two before his illness, and that his memory, impaired during his illness, has led him to mistake the date of his loss. We cannot believe in the dishonesty of the village people. But I am astonished to hear that the affair is known abroad. I thought the secret was confined to ourselves."

"The visitor at the cottage was the mother or mother-in-law of the nurse who attended Mr. Aston in his illness," explained Mary. "The nurse, somehow, heard the particulars, and told them to her mother as a secret. It was not intended that I should hear the conversation of the old women. In fact, they are not aware that I did hear it. But why keep so great a loss a secret?"

"Because Mr. Aston does not wish suspicion to rest upon the innocent, as it might do if the robbery were known and the actual thief or thieves could not be discovered. It was Mr. Aston's especial desire that it be kept secret. Mr. Sinclair and Doctor Pendriggen wished to have the matter thoroughly investigated. I suspect, however, if it be revealed as a secret from one person to another, it will not be long before it becomes generally known throughout the village."

"The old dame who spoke of it," continued Mary, "appeared to be quite minute in her details. She said there were four fifty-pound notes in the pocket-book, besides a gold locket, so remarkable in its appearance that it could be immediately recognised."

"There were other moneys besides, and certain valuable letters and papers," replied the curate. "The nurse must have listened at the bed-room door."

"A pocket-book is a strange receptacle in which to keep a locket," said Mary.

"It appears," replied the curate, "that the locket was a family heirloom. It was engraved with Mr. Aston's crest—two stars and two daggers quartered within a shield, which was surmounted by a griffin, and beneath was the family motto in a scroll. Inside the locket, also, there was a miniature painted on ivory, representing some female relative of Mr. Aston's. He says that he regrets the loss of the locket, and the papers the pocket-book contained, more than the money."

By this time Mr. Sharpe and Mary had arrived at the gate of the farm-house.

"Now, Miss Talbot," continued the curate, "you know as much about the robbery as I do; and," he added with a smile, "I must ask you to keep the matter a secret, as you say the old woman bound Dame Hoolit to secrecy. I must say that I do think you were foolish to allow such a matter to trouble you. The pocket-book was lost under peculiar circumstances, and I don't imagine we have now any more occasion to fear burglars than we had previous to its loss. There are very few in the parish of St. David who have so much property to lose. I think you may sleep in the confidence of perfect security from robbers, and I suppose I must now wish you good night."

Mary passed into the farm-house, glad to escape, for she felt that she could not have disguised her feelings much longer; and Mr. Sharpe, still very uneasy on her account, returned to his own lodgings.

CHARACTERISTIC LETTERS.

COMMUNICATED BY THE AUTHOR OF "MEN I HAVE KNOWN."

In the "Quarterly Review," January 1868, the leading article, purporting to be a review of Lockhart's *Life of Sir Walter Scott*, is in reality a biographical summary and analysis of that life, and has interested me exceedingly. I do not know who is the writer, but he is one of the very few remaining, who are conversant with the facts and competent to handle the subject. He has done so in a friendly, but just and candid manner. The revival of the subject induces me to group some letters bearing upon Scott together.

SIR WALTER SCOTT.

An old Scottish proverb says, "They are far behind who may not follow;" and though vast is the distance of my following, I cannot help thinking that some special circumstances in a literary life, independently of many years of personal intimacy, have given me opportunities enjoyed by few, of observing the character of my illustrious countryman.

Scott was eleven years my senior. His childhood witnessed the same natural scenery; he preceded me at the same school; I possessed his predilection for early ballad antiquities, and sought them out with boyish interest, among shoemakers, weavers, and aged crones.* I had a little law to study in my youth, which I did not like, and I took to literature. There is something amusing in the great similarity and greater difference; I had no "crutch," and it would have been well for Scott if he had never altered his so much into a staff. Authors, and especially poets, who set to work at making fortunes, are not, therein, of the true-blue blood. They lose literary caste, and too often imperil both fame and worldly prosperity.

Scott was born only three hundred years too late to be the daring chief of a Border clan. His courage and adventurous spirit (what pity the latter was misdirected in our commercial age!) would have honoured the times of the wizard Thomas, and kept Annan and Teviotdale alive to ceaseless issues, far different from those of the Ballantyne press.

Transformed as men are to the time in which they flourish, Scott was ever paramount in modern, as the chiefs of Cessford or Harden were in the olden, days. He would lead, boldly and nobly, but his co-operation was never more than cool, and his following any other leader was out of the question. As a patron none more staunch and energetic could be found; to minor relations he was gentle and complacent, but, where offended or thwarted, "Wha dar meddle wi' me" might have been his motto, if he had not chosen to assume the more classic national "Nemo me impune lacessit." In small matters he was more than courteous. The reviewer says truly, "He would tax his judgment to discover something meritorious in every manuscript submitted to him;" and when I have reasoned with him on this point (which several times involved my own opinions in trouble), his defence was, "They are not sent to me for criticism; if I found fault it would not only procure me

* I believe I retain many scraps still, which are fast passing away from the memory of man and the realms of manuscript.

dislike, but be considered officious, and do the writers no good." Where he was friendly he was friendly indeed; where he took offence, the resentment soon passed away. I once displeased him by some too free remarks on one of his later novels, and he showed it by evading a visit to Abbotsford from my county member Sir Alexander Don and myself; but next winter, in London, he was as cordial as ever, and so continued to the day of his death. I felt some satisfaction in having a sad posthumous revenge, by being one on the sub-committee of management for preserving Abbotsford in the family, and by my zeal adding a considerable amount to the subscription.*

It was in his patronising friendships that the generosity and warm-heartedness of his nature shone most brightly. He spared no pains in accomplishing his object, and the activity of his efforts was only comparable with the prudence of his advice. No poet could be more enthusiastic, no man of the world more circumstantially particular on the score of moral obligations and conduct. He was a true friend to Allan Cunningham, to the Ettrick Shepherd (notwithstanding the occasional outbreaks), to the brothers Ballantyne, and others I could specify, and cherished a magnanimous kindness towards all his brethren of the pen. As Byron said, he had no need to be jealous of any one.

I find it a delicate task to afford even a slight example of his social and personal virtues, as I have essayed to describe them. What follows is the best I can do. A worthy Edinburgh gentleman in the legal profession, but more addicted to the cultivation of a fine taste for literature and the arts, than to dry law, had felt the usual consequence, and fallen into deep embarrassment. He was nearly connected with Scott's familiar circle, and it was deemed advisable for him to seek employment for his talents "in a country new." The annexed is Sir Walter's letter to him:—

DEAR SIR,—I am sorry for the circumstances which oblige you to think of giving up your profession and exchanging your residence, and would think myself very happy if I could be of use to you in doing so to advantage. I have little doubt that if the situation of the editor to the "Courier" should open, you would be able to conduct it with profit to the proprietors and reputation to yourself, as your acquirements in modern languages, and your good sense and readiness in composition, would be called into frequent employment. I should think, also, you possess that tact and knowledge of the world for want of which so many editors are apt to go wrong, though possessed of many brilliant accomplishments. The profession of editor has, perhaps, many requisites unknown to those who have never professed it; but limiting my attestation to the obvious qualities, such as all men know and understand, I would consider it as a very fortunate circumstance to place you at the head of any paper in which I was interested. I am not aware whether I can serve you further, not knowing any of the proprietors; but if it were otherwise I would be happy to do so, and I request, should an opportunity occur, you will without scruple apply to,

Dear Sir,
Your most faithful, humble servant,
WALTER SCOTT.

Abbotsford, 2 October, 1830

Suffice it to note that the editorship of the "Courier" was not open (as rumour had circulated) at the time. William Blackwood and James Ballantyne interested themselves in the same cause; and I was made a party to the commencement of a literary career which began in a distant province, but has been continued with in-

* In the introduction to these Letters, I explained the difficulty, from their nature, of avoiding egotism, and I have only to hope that I may not be blamed for carrying it too far. Such illustrations of character as my theme required, and the long period which has elapsed, must plead my apology. It is not the mighty literary Enchanter of whom I am endeavouring to preserve some traits, but the individual man, Walter Scott, in his sayings and doings, as he lived.

creasing reputation and influence in the great centre of literary activity ever since. Scott was highly gratified by this success.

JAMES BALLANTYNE.

This most faithfully attached adherent and friend of Sir Walter Scott has had but scant justice done to him in the published versions of, and animadversions upon, his connection with the great commercial enterprise and melancholy catastrophe in which his ambitious principals became so miserably involved. Throughout all their joint transactions he was only a secondary ally, and yielded that allegiance which acknowledged superiority always commands from inferior powers. With relation to their conduct of business, I have no means to judge. It seemed to be all gorgeous and golden. Their credit was unbounded. Monte Christo himself could not be more profusely accommodated.* But let the cause of the failure have been what it might, James Ballantyne's share in it was simply his rising and falling with the genius he worshipped. He was a gentleman, and one of no ordinary intellectual capacity. The services he rendered (even as a printer anxious to rectify accidental mistakes) not only to the rapidly brought out writings of Scott, but to the productions of the Ettrick Shepherd and others, were of great value. I could furnish some striking instances; but suffice it to say that I have no reason to hold my estimable friend responsible for the crushing fact that, in glowing prosperity and prospects, the arm into which his was linked was stretched too far for safety, and could not be retracted to restore the hand its strength. Ballantyne survived Scott not quite four months.

Though this notice is rather a sequel to that of Sir Walter Scott (every matter touching whom will ever possess interest) than a separate attempt to supply characteristic traits of another, I must adventure a letter, which, setting apart its private flatteries, will speak fairly of the literary status and talent of James Ballantyne.

3, Heriot Row, Edin., May 10th, 1825.

MY DEAR SIR,—This letter is written to introduce to you my friend and brother-in-law, Mr. P., of Edinburgh. He has never been in London before, and is now on business which will leave him no great overplus of time to employ in amusement; but he has heard both my wife and myself speak so warmly and feelingly of your kind attentions, and very useful services, that I know I am gratifying him much by putting him within their exertion in his behalf, so far as is perfectly convenient and agreeable to you. You will find him a strong-minded clever man, of some humour, . . . and altogether a very excellent fellow. What kindness you can easily show him I shall receive as kindness to myself; and for him I can assuredly say that his greatest pleasure will be to requite it when you put it in his power. We are in sooth wearying for you here, and I really wish you would revisit Scotland, were it only to prove that it is not always the case that a prophet hath not honour in his own land.

The "Crusaders" will be out, I think, about the end of June. *Entre nous*, there will be five volumes. The first two are employed in telling a tale called the "Betrothed," being, in my mind, perhaps the most defective thing the author ever produced—not good at all, for HIM, that is. The other three are to contain the "Talisman," of which I think magnificently. In fact I do not know whether it will not restore the author to the very highest vantage-ground he has ever occupied. How the one is so little and the other so grand, nay, in sooth, I cannot tell; but it is so. I have no doubt you will agree with me. The portrait of Richard of the Lion Heart is exceeded by not one of his former creations, not, I think, by Rebecca; and there is an eastern physician and a hermit of unrivalled power. There is, farther, an admirable story, comprising one or two mysteries

* I remember my surprise when, on a visit to Rochdale, ensconced in the bank back parlour of my friend Mr. John Roby, I saw bills for many hundred pounds, between Edinburgh and London, and especially, if at long dates, gladly discounted as an excellent investment of money.

of great interest, but not yet unravelled. I speak of vol. 1 and the half of vol. 2, that is, of one half of the whole; and it is a fair presumption that, having proceeded so far so admirably, he will not come tardy off in what remains. This, by-the-by, is all to Mr. Jerdan, not to the editor of the "Literary Gazette."

Ever truly yours,

J. BALLANTYNE.

Five years afterwards, and nearer the end, a short note tells of the same kindly disposition and wish to benefit the deserving. It introduces one of the earliest and most popular illustrators of Scottish song that ever excited the admiration of the South.

18, Albany Street, Sept. 25, 1830.

MY DEAR SIR,—Allow me to introduce to you my friend Mr. Wilson, whose high merits as a vocalist are of course well known to you. He and I have been long acquainted, and I run no risk in pledging myself that he will do nothing but credit to your kindness.

In haste, believe me ever

Most sincerely yours,

JAMES BALLANTYNE.

JOHN BALLANTYNE.

It might seem a sort of assent to certain publicly expressed opinions if I refrained from adding a few words to the foregoing statements, and in defence of the reputation of John Ballantyne, the next brother to James, and one of the partners in the Edinburgh printing firm.* Some writers have spoken very disparagingly of him, and treated his intimate association with Scott as degrading to the latter.

I do not wish to defend anything in itself wrong; but I would respectfully suggest that it is unjustifiable to judge the manners of a former age by the standard of our present day. Scott and the Ballantynes had thirty years of the last century on their heads and hearts. They began their literary connection in the "Kelso Mail," established in 1797, when terror filled the country with a dread of Jacobin outrage, largely inspired by the sanguinary Revolution in France; hence their Toryism. And with regard to their social habits, these were in accordance with usages of too general prevalence over "the land of cakes." The readers of Dean Ramsay's "Characteristic Scottish Anecdotes" will understand me. The feelings and fashion of the age agreed entirely with the convivial enjoyments of Scott and his boon companions. No doubt the wine-cup, the speech, and the song of those times will not bear defence. Our generation has seen a great improvement in all these particulars. I venture simply to affirm that poor "Johnny" Ballantyne ought not to be singled out by critical censure as having been the main cause of the irregularities of others.

That he was the cherished associate of the mighty wizard is, in spite of the charge, something in his favour; and why he was so it is easy to tell. Scott was eminently convivial within the limits of becoming mirth, and "Johnny" (familiarily so hailed) was what is known in Scotland by the title of the "Whistle Binkie" of the company. Society delighted in him. His humorous songs and comic stories were most entertaining and laughable. Of the former, some were indeed objectionable for any time or occasion (I remember one free enough even for that period, for I desire to speak with a clear breast); but in the latter he was unequalled. As a proof, I may state that he taught Matthews his popular tale of the

minister drenched with rain, who was comforted by the wife of his colleague bidding him "gang into the poopit, where he would be dry enuch!" and the pupil never reached the indescribable humour of his instructor.

But, lest I also should become "dry enuch" (having no letters of John Ballantyne), I shall conclude by affirming that Johnny Ballantyne had merits to make him worthy of Scott's regard, and that some of his faults may fairly be spoken of as those of the times.

THE MIDNIGHT SKY AT LONDON.

APRIL.

BY EDWIN BURNIE, F.R.S., ROYAL OBSERVATORY.

WHEN we direct our attention to the heavens on a clear starlight winter's night, the first impression on our mind is that an almost infinite number of stars is presented to our view. This is, however, merely an optical illusion produced principally by the twinkling of the stars, and by their irregular position in the sky, for the whole extent of the heavens is too vast to be included at one time in the field of vision. Hence arises the erroneous impression that the number of stars is so great. Now, on the contrary, seldom more than two thousand can be perceived by an ordinary eye at once, including all stars down to the sixth magnitude above the horizon. Observers, however, with superior eyesight can occasionally detect objects of the seventh magnitude, but this exceptional vision is very unusual. There are only twenty-four stars of the first magnitude in all parts of the heavens, several being visible only in the southern hemisphere. The stars of the second magnitude number about fifty, and of the third about two hundred. Including all stars down to the sixth magnitude, or within the limits of ordinary vision, about five thousand stars altogether can be seen in the latitude of London during the year. But if we view the sky with a very powerful telescope, the minute objects composing the groundwork of the heavens may be counted by tens of thousands, or even by hundreds of thousands of stars.

The observed diminution in the magnitude of objects, as well as the increasing numbers contained within the field of view, as their distances increase, may be briefly explained as follows. Let us imagine a person standing in the middle of a forest, surrounded by trees in every direction. Those nearest to him would be few in number and the trunks comparatively large; but if he were to take the next circuit of trees outside those around him, the visible trunks would be increased in number, but their dimensions would appear smaller. Proceeding onwards in this manner, the trunks of the trees would at last be very numerous indeed, but their apparent size would bear no comparison in magnitude with those near the observer. But still these apparently small distant trees might be really considerably larger than any in the whole forest. We will now substitute the stars for the trees. For the sake of analogy, let us now suppose that the observer on the surface of the earth is situated in the centre of a forest of stars, of indefinite extent; those few which are nearest to our own system would appear large and bright, and we distinguish them of the first magnitude; those which are farther removed from us would appear in greater numbers, but with less intrinsic brightness—these we call of the second magnitude; those which are still farther from us would be considerably increased in number, but their magnitude would appear much smaller. If we continue increasing the distance, the decrease of brightness will

* Alexander, the third and youngest brother, was an accomplished and charming musician. I believe that several of the family live at the present time, as their distinguished representatives in the arts and literature.

be in inverse proportion to the increased number of the stars, till we are stopped by the limit of vision. With telescopic aid, the observable stars are too numerous for any accurate determination of their numbers. M. Argelander, a zealous German astronomer, has, however, actually published a catalogue of the exact positions of no fewer than a quarter of a million of stars greater than



INDEX MAP, LOOKING NORTH, APRIL 15.

the tenth magnitude. These numbers nevertheless fail to represent properly the boundless extent of the stellar universe, for every improvement in the construction of astronomical telescopes unfolds to the view of the astronomer hundreds of thousands of minute stars which had never been resolved before. Sir John Herschel remarks that "beyond the limits of unaided vision, telescopes continue the range of visibility, and magnitudes, from the eighth down to the sixteenth, are familiar to those who are in the practice of using powerful instruments; nor does there seem the least reason to assign a limit to this progression; every increase in the dimensions and power of instruments, which successive improvements in optical science have attained, having brought into view multitudes innumerable of objects invisible before; so that, for anything experience has hitherto taught us, the number of the stars may be really infinite, in the only sense in which we can assign a meaning to the word."



INDEX MAP, LOOKING SOUTH, APRIL 15.

The aspect of the midnight sky of April is somewhat different from that depicted in the diagrams for March, numerous stars of large magnitude having since last month made their appearance in the east and south-east, while some conspicuous objects in the west have dis-

appeared below the horizon. The stars above the second magnitude, now visible south of the zenith, are Regulus in Leo, Spica in Virgo, Arcturus in Boötes, and Antares in Scorpio. Taken as a whole, the south sky at midnight still contains a considerable number of interesting objects, although no constellation has that striking appearance which Orion and some others present at an earlier or later period of the year. For example, we have still the bright stars in Leo and Virgo in the western part of the sky, while on the eastern side of the meridian the bright stars in Boötes, Serpens, and Scorpio are conspicuous objects at different altitudes. There are numerous other constellations, which we shall endeavour to point out to the observer, who, with the assistance of our diagrams, will, we expect, have no difficulty in identifying the principal stars. By the knowledge of these stars he will have some idea of the positions of the constellations of which they are the chief members.

We must again suppose the observer standing with his back to the Pole star, with his eye directed along the plane of the meridian looking *due* south. At first, however, we would wish him to look directly over head, still with his back towards Polaris. He will then perceive that the last of the stars in Charles's Wain, in Ursa Major, is very nearly in the zenith; it is really about two degrees south of that point. This is the only month that this star, Eta Ursæ Majoris, or, as it is sometimes named, Alkaid, is in the south half of the sky; in our diagrams for March and also for next month, it will be found with its six companions in the northern half. Passing the eye downwards, a bright star, with a reddish tinge, strikes our attention slightly east of the meridian; this is Arcturus. Considerably lower, a few degrees west of the meridian, the white star Spica shines brilliantly. Confining our remarks for the moment to the western sky, and commencing from the zenith, or the centre of the upper portion of the diagram, the first star which will probably be noticed is Cor Caroli, the chief member of the small constellation of Canes Venatici (the greyhounds). It will be remarked that Cor Caroli is in an isolated position, no star of equal magnitude being near it for some distance on all sides. Then comes the group of small stars in Coma Berenices, below which, extending from the meridian to a considerable distance towards the west and south-west, Leo and Virgo occupy the major portion of the sky. The principal stars in Leo are all visible about midway between the zenith and horizon, or in the right hand upper corner of the lower diagram; they may be recognised in two ways, one by the irregular trapezium formed by the brightest objects, and the other by the imaginary appearance of a sickle produced by a group of six or seven stars, of which Regulus is the most southerly. The best time, however, for recognising this celestial reaping-hook is when it is

* The identification of the principal stars in the two views will be much facilitated by reference to the index-maps, which have been specially prepared to assist the reader while comparing the diagrams with the descriptive letter-press. The names of the stars of the first and second magnitudes are generally inserted, and a few of the third. By these additional diagrams we hope that the practical usefulness of the star-views will be considerably increased.

It may probably be useful to mention again here, although we have incidentally alluded to it more than once in our descriptions, that the *zenith* is that point of the heavens directly overhead, and that the centre of the upper boundary-line in the diagrams coincides exactly with it. The *meridian* is an imaginary line dividing the visible heavens into two portions, one on the right, and the other on the left of the observer. The meridian line, therefore, passes from the north horizon to the south, through the celestial pole and the zenith. From this the reader will understand that in the diagrams a line drawn from the zenith through the centre will represent the celestial meridian of the observer's station.

—E. D.

W

E



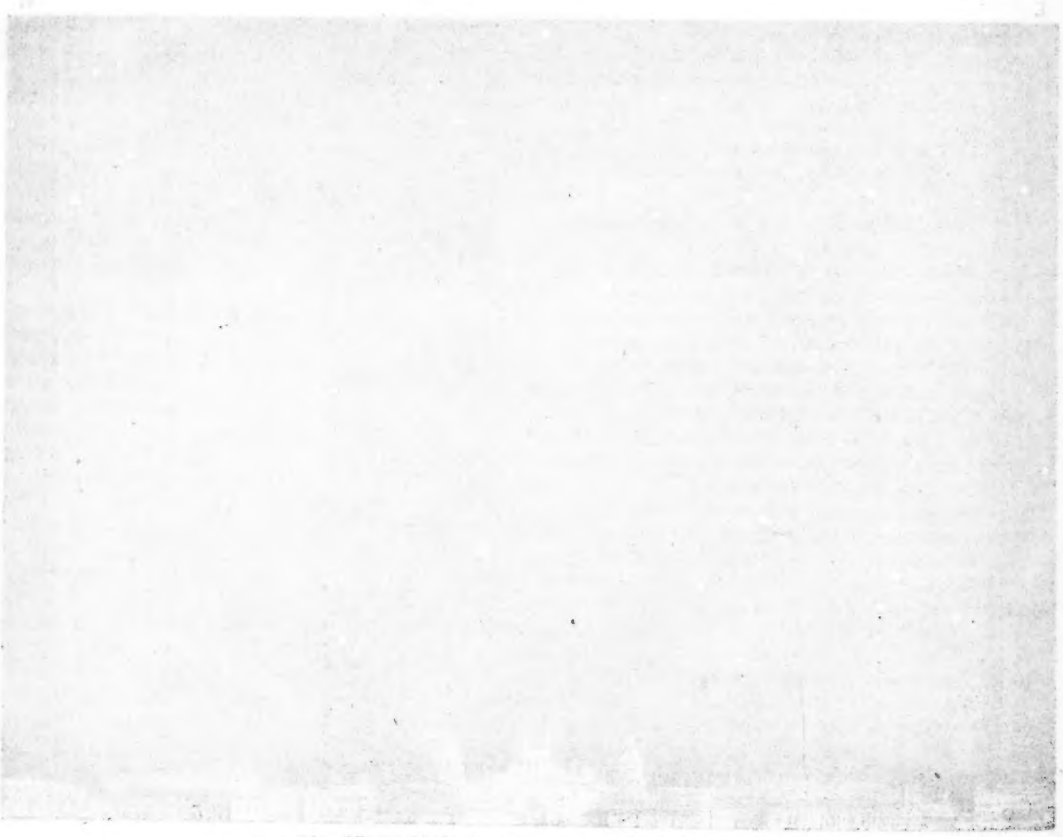
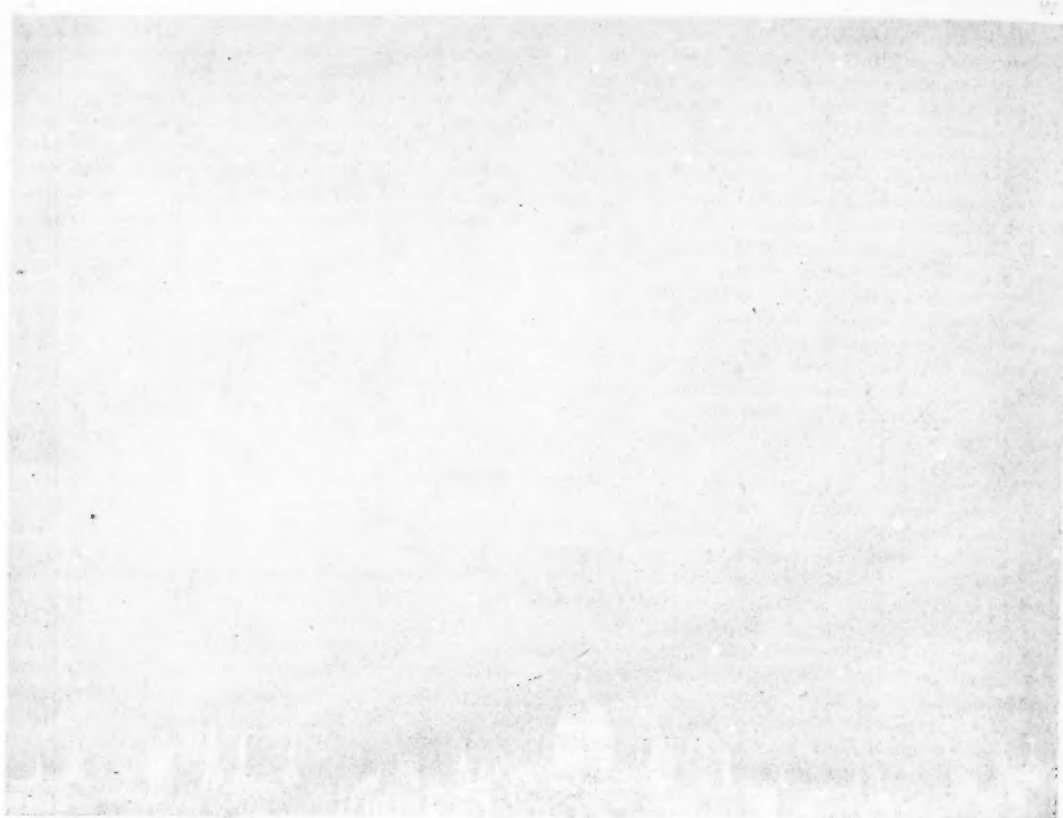
THE MIDNIGHT SKY AT LONDON, LOOKING NORTH, APRIL 15.

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THE MIDNIGHT SKY AT LONDON, LOOKING SOUTH, APRIL 15.



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situated nearer the meridian in the earlier hours of the evening, or about 8 P.M. in April, when it can be seen to great advantage and with considerable clearness. This group, near which is the radiant point of the November stream of meteors, consists of about six stars of average magnitude, one being between the first and second, one of the second, two of the third, and two of the fourth magnitude. Between Leo and the meridian, most of the chief stars in Virgo are situated, but excepting Spica, none of them is greater than the third magnitude. One of these is, however, a most interesting binary star, perhaps the most carefully observed of any in the heavens. Some account of the relative movements of its components will be given when we treat specially of the constellation Virgo. The south-west portion of the sky towards the horizon is occupied chiefly with the small constellations, Corvus and Crater, while Hydra is spread over the horizon from west to nearly south.

East of the meridian, and at no great distance from it, the constellation Boötes, containing Arcturus and several stars of the second and third magnitudes, is the most attractive group in that portion of the heavens. Below Boötes, about half-way between the zenith and horizon in the south-east, is Serpens, and lower still, near the horizon, Scorpio will be recognized by several bright stars, of which the principal is Antares, of the first magnitude. This constellation is very prolific in stars of the fourth and fifth magnitudes. In the east-south-east, Corona Borealis is easily distinguished near Boötes by its semicircular group, in the centre of which is Alpha Coronæ, known also frequently by the names of Gemma and Alphecca. East of Corona Borealis and Serpens are the important constellations Hercules, Ophiuchus and Aquila, the last occupying the eastern horizon.

The principal constellations in the midnight south sky of April have been generally mentioned in our preceding remarks. The complete list consists of the whole of Sextans, Crater, Corvus, Leo, Virgo, Libra, Canes Venatici, Coma Berenices, Boötes, Corona Borealis and Ophiuchus, and parts of Hydra, Leo Minor, Ursa Major, Hercules, Aquila, Scorpio, and Centaurus.

The constellation Virgo, which occupies a considerable portion of the sky west of the meridian at midnight, and east of the meridian in the earlier hours of the evening, is the sixth sign of the zodiac. It was popularly considered in former times as the sign belonging to the harvest season, because when the sun enters it the cereal crops are ripe for the sickle. In most representations of Virgo, therefore, she appears sometimes as Ceres and sometimes as an angel, with ears of corn in her hand, defined in the heavens by the position of the bright star Spica. On this subject, Admiral Smyth has remarked that "we are told that among the Orientals she was represented as a sunburnt damsel, with an ear of corn in her hand, like a gleaner of the fields; but the Greeks, Romans, and moderns have concurred in depicting her as a winged angel, holding wheat ears, typical—of the harvest, which came on in the time of the Greeks as the sun approached Spica. She forms a conspicuous and extensive asterism, replete with astronomical interest." Virgo is bounded on the east by Libra, on the west by Leo, on the north by Boötes and Coma Berenices, and on the south by Corvus, Crater, and Hydra. The number of stars in Virgo observed by Ptolemy was thirty-two, but Flamsteed has recorded one hundred and ten, and in Bode's Celestial Atlas four hundred and eleven are inserted.

The most brilliant star in Virgo is Spica, which forms,

as we have previously mentioned, almost an equilateral triangle with Denebola in the tail of Leo and Arcturus in Boötes. Spica may also be found by drawing a straight line from Beta Boötes through Arcturus, and may also be readily distinguished by its isolated appearance. Among other star references a long line drawn from Dubhe, in Ursa Major, through Gamma in the same constellation, will reach Spica. Or a line from Polaris, through Mizar, the star in the middle of the tail of the Great Bear, will also pass through Spica. The following lines will popularly guide the observer to the positions of several bright stars now above the horizon:—

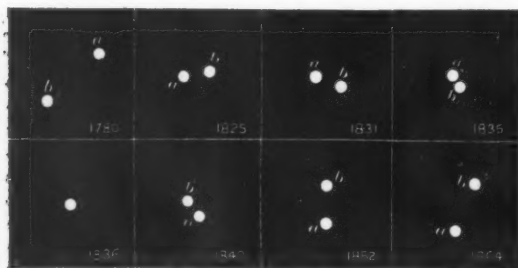
"From the Pole-star through Mizar glide
With long and rapid flight,
Descend, and see the Virgin's spike
Diffuse its vernal light.
And mark what glorious forms are made
By the gold harvest's ears,
With Deneb west, Arcturus north,
A triangle appears;
While to the east a larger still,
Th' observant eye will start,
From Virgo's spike to Gemma bright,
And thence to Scorpio's heart."

The principal remaining stars in Virgo can be easily identified between Spica and Denebola. They are, however, generally known only by a Greek letter attached to the name of the constellation. The first of these stars from Spica is Gamma Virginis, the two nearer the zenith are Delta and Epsilon, and the two west of Gamma are Eta and Beta. The last star is below Denebola.

By far the most interesting object to astronomers in Virgo is acknowledged to be that extraordinary binary system known as Gamma Virginis. Its position can be identified in the heavens from the preceding explanation. This class of stars, above all others, exhibits to us the proof of the law of gravitation being as applicable in remote regions of the universe as in the comparatively smaller interval of space occupied by the members of our own solar system. It will not be out of place to remark here that double stars are very common in all directions of the heavens, that there is scarcely a constellation in which several are not to be found, and that the number of these objects catalogued by different observers amounts to several thousands. But ordinary double stars must not be confounded with those which have been proved by observation to belong to a common system, for many of them are known to be only optically double. For example, two stars appearing to the naked eye as one object, but through a telescope as two, may be separated from each other by a distance as great as between any two stars in the heavens, though by accident they are viewed from the earth in the same line of direction. These apparently double stars are consequently always observed in the same relative order, so that their telescopic measures of distance and angular position remain for ages without sensible alteration. But in the double stars known to be physically connected hence their name of binary stars—these measures of distance and angular position are always changing more or less, and when observations are made at different epochs, the movements of the stars with respect to each other are very evident indeed. Sir John Herschel remarks that "we have the same evidence of their rotations about each other that we have of those of Uranus and Neptune about the sun; and the correspondence between their calculated and observed places in such very elongated ellipses, must be admitted to carry with it proof of the prevalence of the Newtonian law of gravity in their systems, of the very same nature and

cogency as that of the calculated and observed places of comets round the central body of our own."

As an example of a binary star, we could not select a more appropriate one for our purpose than Gamma Virginis, because it is one which has received constant attention since the beginning of the eighteenth century. When Mayer observed it in 1756, the distance between the two stars was found to be six and a half seconds of arc. Sir William Herschel, in 1780, observed this space to be one second smaller. From recorded observations since that time, the stars have been seen to approach each other gradually, till at length, in 1836, they were so close that the highest magnifying power, applied to the most celebrated telescopes, was unable to separate the two components. After this the star gradually opened, and in 1837 was again seen double when viewed through a good telescope. In 1840 the distance between the components was observed by the Rev. W. R. Dawes, who found it nearly a second and a half; in 1852, from observations made at the Royal Observatory, this distance had increased to upwards of three seconds; and from some excellent measures made by the Rev. R. Main, at Oxford, in 1864, the space between the two stars was equal to four seconds and a quarter. At the present time it slightly exceeds this quantity. In all probability in a few years hence the relative appearance of the stars in Gamma Virginis will be similar to that first recorded by Bradley in 1718, since which time one complete revolution will then have been made. This period, computed from the observations, is about 180 years. In the small diagram of Gamma Virginis we have given a selected number of the telescopic appearances of this beautiful star, which will possibly give a better idea of the relative movements of the components than by any farther detailed description.



Two small constellations north of Virgo, extending together nearly to the zenith, are worthy of notice, though they are not celebrated for the magnitude of their stars. That nearest Virgo is Coma Berenices, named after the wife of an ancient king of Egypt. This lady vowed to consecrate her fine head of hair to the goddess Venus, if her husband returned in safety from a dangerous expedition. On the return of the king, she caused her locks of hair to be hung up in the Temple of Venus; but in a short time they were found to have disappeared. A wise man of the time, one Conon, an astronomer, declared that they were taken by Jupiter, who turned them into a constellation of stars. This fable, like many others of the same kind, must only be taken for what it is worth; but it is true enough that several of the ancient philosophers have alluded to these stars as "the tresses." To the naked eye, the principal group has a nebulous, or rather woolly appearance, owing to the aggregation, in a limited space, of a number of stars of the fourth and fifth magnitudes. These can be easily found by drawing an imaginary line from the

bright star Alkaid on the tip of the tail of the Great Bear, through Cor Caroli, as far as Denebola. About midway between the two last-named stars, the line will pass through the group. By reference to our south diagram, it can be recognized by a line of five small stars, mostly of the fifth magnitude. This is the smallest class of stars inserted in the large diagrams.

Canes Venatici, or the greyhounds Chara and Asterion, form a small constellation of comparatively recent origin, having been introduced into the heavens by Hevelius, in the seventeenth century. It is situated north of Coma Berenices, and occupies an empty space between Boötes and the hind legs of Ursa Major. Excepting its principal star Cor Caroli (Charles's heart), there is no object worthy of special notice in this constellation: In most celestial atlases or globes, Cor Caroli is placed in the centre of a heart attached to a crown on the shoulders of Chara. It is a beautiful double star, the larger component being white, and the smaller a pale lilac colour. The following anecdote of the origin of the name of this star is given by Admiral Smyth: "But it came to pass that it was named Cor Caroli by Halley, at the suggestion of Sir C. Scarborough. The popular story, or rather the vulgar one, runs—how Scarborough, the court physician, gazed upon a star the very evening before the return of King Charles II to London, the which, as in duty bound, appeared more visible and refulgent than heretofore; so the said star, which Hevelius had already made the lucida of Chara's collar, was thereupon extra-constellated within a sort of valentine figure of a heart, with a royal crown upon it; and so the monarch, it would seem by this extraction, remained heartless." Cor Caroli can be readily identified by reference to the south diagram; also a line drawn from Polaris through the first star in the tail of Ursa Major will lead directly to it. If we take advantage of the rhymester, we shall obtain other directions for finding not only Cor Caroli, but also the important group of Corona Borealis.

"When clear aloft, Boötes seek,
His brilliance leads the gaze,
And on each side its glitt'ring gems
The spacious arch displays;
Arcturus east to Vega join,
The Northern Crown you'll spy—
But west, to Ursa's second star,
He marks Cor Caroli."

The principal constellations visible at midnight in the northern sky, in addition to those which are wholly circumpolar, are Lyra, Cygnus, Lynx, Vulpecula, and parts of Cancer, Gemini, Auriga, Perseus, Andromeda, and Aquila. At this time, six of the seven principal stars in Ursa Major are near the zenith a little to the west of the meridian, the seventh in the tip of the tail being about two degrees south of the zenith. Below Ursa Major, towards the north-west, are the constellations Lynx and Camelopardus, in both of which there is scarcely any star greater than the fifth magnitude; consequently this portion of the heavens looks comparatively bare. A considerable number of small stars are, however, contained in these two constellations, though not inserted in the diagram, to prevent confusion in the mind of the reader. In the W.N.W., between Lynx and the horizon, Castor and Pollux can still be distinguished, and towards the north-west, near the Milky Way, Beta Aurigæ and Capella are very conspicuous. Near the north horizon, several bright stars in Perseus can be seen slightly west of the meridian, while about the same distance east, but nearer the pole, Cassiopeia is visible. Proceeding eastward, the

stars of the first magnitude, Alpha Cygni and Vega, shine above all others near them; and almost due east, and very near to the horizon, the chief stars in Aquila have just risen. The strictly circumpolar stars, in Draco and Cepheus, can be generally recognized east of the meridian between Polaris, Alpha Cygni, and Vega. The stars in Ursa Minor are now nearly all between the zenith and the pole, Kocab, or Beta Ursæ Minoris, being near the meridian.



POSITION OF VENUS AT 8 P.M., APRIL 15.

During April, 1868, the planet Venus is the evening star, and will be a very conspicuous object in Taurus in the western sky soon after sunset, and in the W.N.W. for some hours afterwards, exceeding in splendour the brightest of the fixed stars. She disappears below the horizon on April 1st. at 10.40 P.M., on the 15th at 11.16 P.M., and on the 30th at 11.42 P.M. Mercury and Mars are in unfavourable positions for observation, either with the naked eye or telescope, both planets rising only a short interval of time before the sun. Mercury will be at no great distance from Jupiter on the 13th, and from Mars on the 17th. * Mars rises on the 1st at 5.11 A.M., and on the 30th at 4.42 A.M. On the 8th he will be in conjunction with Jupiter, when the two planets will be remarkably close to each other. Jupiter will be visible in the morning throughout the month, shortly before sunrise. On the 1st he rises at 5.15 A.M. or twenty-one minutes before the sun, and on the 30th at 3.33 A.M., or about an hour before sunrise. Jupiter will not, however, be well seen till after the middle of the month, when his four satellites will again be visible after having been lost in the rays of the sun since the beginning of February. Of the large planets, Saturn only can be favourably observed. On the 1st he rises about three-quarters of an hour before midnight in the south-east; on the 15th at 10.18 P.M., and on the 30th at 9.15 P.M. Saturn will be sure to attract attention. For several months he will be situated in the constellation Scorpio, and very near to the stars Beta Scorpium and Antares. The three objects will not differ much in magnitude, but the planet may be identified by its white and steady light, while that of Antares is of a reddish tinge, and Beta Scorpium is the smallest of the three.—Uranus can be easily seen with the aid of a telescope, and occasionally by the naked eye, in the absence of moonlight, when its exact position amongst the neighbouring stars is known. This planet sets at 2 A.M. on the 1st, and soon after midnight on the 30th.—The planet Neptune, though nearly equal in bulk to Uranus, is so far distant from us that it appears in the field of view of a telescope no greater than a star of the seventh or eighth

magnitude. It is, therefore, always invisible to the unassisted eye, and, consequently, its movements can never be of much popular interest.

The moon will be in the constellation Cancer on the 1st and 2nd of April, and in Leo from the 2nd to the 4th. On the 3rd, at about 8 P.M., she will be very near the star Regulus. On the 5th she enters Virgo, continuing in this sign till the 7th. On the 8th and 9th she is in Libra, and on the 10th in Scorpio. After this day the moon is only visible in the morning hours till new moon. On the reappearance of the young crescent moon, she will be in the constellation Taurus, passing on through Gemini and Cancer by the end of the month. The star Aldebaran, in Taurus, will be very near to the moon on the morning of the 25th; and on the 30th, near midnight, Regulus will, for the second time this month, be very near the moon. The changes of the moon will take place as follows:—Full moon on the 7th at 7.17 A.M.; last quarter on the 14th, at 10.34 P.M.; new moon on the 22nd, at 8.20 P.M., and first quarter on the 29th, at 6.18 P.M.

Our description of the positions of the stars at midnight on April 15th, will, with the diagrams, be also available on May 15th, at 10 P.M., on January 15th at 6 A.M., on February 15th at 4 A.M., and on March 15th at 2 A.M.

THE GAS WE BURN.

THE use of coal-gas for domestic purposes has been common in this country for more than fifty years, so that the proportion of our existing population, who can recall the aspect of London and other great towns as it was before gas became common, is but comparatively small. For the sake of those of our readers to whom the manufacture of gas is practically a mystery, we are going briefly to describe the processes by which the coal that warms our dwellings and cooks our food, is made also to yield us light within doors and without. London and London suburbs contain more than a score of gas factories, and there is hardly a town in England that does not boast its own gas-works. Everybody has seen the huge gasometers towering above the chimneys-tops, and has encountered the gangs of sooty-faced men going to and fro at their labour; while few have had interest or curiosity enough to explore these resorts of curious industry, and to observe what is constantly going on there without pause or intermission, from one year's end to another.

On entering a gas-work we do not fail to remark that the several operations necessarily cover a considerable area of ground, not the least portion of which is occupied by the enormous circular vessels which are the storehouses of the gas when its manufacture is completed, and from which it passes into the mains, or street-pipes, by which it is led off, it may be to the distance of many miles, for the service of the public.

Passing on amid these monster vessels, and various smaller structures of somewhat similar form, among which are rows of tall pillars coupled together at the top, we follow our guide to the retort-house, where the business of making gas may be said to begin. The spectacle is sufficiently startling and impressive to one who witnesses it for the first time. It is night, and the stars are shining clearly, and so is the half-moon, in the cold blue sky aloft, and as you look up you see them glimmering through the lurid smoke and smother of the scene. At first you do not know what to make of it. You are in a kind of cavern some hundred yards long and not

ten wide, the walls of which are spouting fire in fifty places at once, and every now and then bursting out at some new point. Groups of men of weird aspect and frantic gestures, half-clad and begrimed with coal-dust, are poking with long pikes at the spouting flames, and raking forth masses of glowing matter, while others are thrusting fresh fuel into the fiery mouths and rapidly closing them up. After a while these operations begin to explain themselves. The fire-spouting holes are the mouths of the retorts in which the coal is burned. The retorts are hollow iron cases about seven feet long and rather cylindrical in shape, with a diameter of some fourteen inches or more. They are closed at the farther end, and are only opened at the mouth for the admission and withdrawal of the fuel. They are kept constantly at a red heat by means of fierce fires of coke, the furnaces being so contrived as to subject them all to a great, and, as near as possible, an equal heat. The retort is filled by means of a long iron scoop fitting its interior, by which the charge of coal is readily introduced, and, the scoop being inverted, is withdrawn empty: the right charge is about two-thirds of the quantity the retort would hold; it would not do to put in more, because the coal will be transformed into coke when it comes out, and will have increased about one-third in bulk, for which increase space must of course be allowed. The moment the charge of coal is introduced, so great is the heat it meets that it bursts into flame; and if now the mouth of the retort were suffered to remain open the coal would be consumed as coal is consumed in an ordinary grate, resulting only in flame and cinders. But flame cannot exist without air, and the mouth of the retort being closed up and the air excluded, the disengaged gas, which would be flame if air were present, escapes up a tube fixed over the mouth of the retort, which tube dips into the hydraulic main—a large iron pipe running along above the topmost retorts and communicating thus with every one of them. As the distillation of the coal goes on, a quantity of tar, ammoniacal liquor, and other matters, rises along with the gas through the connecting pipe, and flows over into the hydraulic main, which is so contrived as always to be about half-full of this semi-liquid stuff; the feeding-tubes from the retorts all dip below the surface of the liquid, by which arrangement any return of the gas is prevented when the charges of the retorts are drawn or they have to be repaired or otherwise interfered with.

We have said that the retorts are somewhat cylindrical in shape: we may add that the shapes vary in different factories, and also for different objects. Some are strictly circular; a cross-section of others would show them in a greater or less degree oval; others, again, are waggon-shaped; while many are known from their form as "kidney-shaped." The waggon, or \square shaped, appear to be very generally used. The retorts are arranged in sets, and a set may consist of three, five, seven, or nine, according to the size of the furnaces and the convenience which space may afford for their arrangement. Each set of retorts has its own furnace or furnaces, and its own working gang. The time during which the retorts are kept burning will depend in some degree on the nature of the coal used, and may vary from six to eight hours, though the operation may be greatly accelerated in cases of urgent need. It is not advisable to continue the distillation too long, because the best gas is that which is first produced, while that obtainable after a certain lapse of time would be so bad as to be not merely valueless but detrimental. To ensure good distillation, the retorts should be heated to a red heat, and maintained at a regular temperature. If the retorts are not

sufficiently heated at first, the gas given off would burn with only a feeble light; and if they are allowed to get too hot, the produce may be gases that give still less light, or even nitrogen and carbonic acid, which extinguish flame.

As the gas, together with the tar, ammonia, etc., flows from the retort-tubes into the hydraulic main, the heavier matters are led off through a pipe in the main conducting to a tar-cistern, generally underground, the pipe being so adjusted as to leave the main always half-full of the tarry fluid. The gas, by its own elasticity, forces its way from the main into coolers or condensers, consisting for the most part of a series of tall, upright pipes, enclosed in larger ones, the spaces between the outer and inner pipes being filled with water flowing through in a cool stream. The pipes through which the gas circulates open at the bottom into a kind of chest or tank, in separate divisions, into which the tar condensed on the cool surface of the pipes trickles down, and whence it can be drained off into the tar-cistern at pleasure.

On entering the condensers the gas is at about the temperature of 120 deg., and it cools down to 60 deg. before leaving them. Though it has parted with the mass of its impurity in the condensers, it is not yet by any means in a fit condition for use, as many injurious gases are mixed with it, the action of which on the luxurious contents of some of our dwellings, and on our own sensations, would be anything but agreeable. These noxious elements have therefore to be removed by purification; and it is in this department of gas-making that the greatest difficulties have been encountered, and the most valuable improvements have been effected. Up to a comparatively recent period, the purification of coal-gas was accomplished almost entirely by the use of lime or lime and water. The gas was passed in the purifiers through lime-water, or through layers of lime slightly moistened; and, as a large quantity of lime was necessarily used, and immense masses of it became saturated with foul gases, the odours it gave off were disgusting beyond expression; and it was this vile fetor which in past years rendered the very neighbourhood of a gas-work unbearable. The necessity for perpetuating such a nuisance, however, no longer exists, and in some of the London gas-works the whole manufacture is conducted throughout without the prevalence of any disagreeable smell, and even with less annoyance from that source than one meets with in average workshops.* This improvement has been brought about by the substitution of oxide of iron instead of lime in the purifiers, or rather, of an artificial compound containing such chemical constituents of oxide of iron as have the required purifying power. The substance looks like sawdust dyed brown; it is almost odourless before use, and even after use, when it has taken up the impurities of the gas, and is stained by them to a dense black, it may be freely handled without unpleasantness.

The purifiers, into which the gas passes after leaving the condensers, are large rectangular vessels, wide as the floor of a room, about three feet in depth, and fitted up interiorly with three stages on floors one above the other, the stages consisting of laths of wood, very narrow and nearly touching each other, and the whole stage being divided into sections, so as to be easily removed when necessary. On these several floorings of lath the brown oxide is spread loosely to the depth of an inch or more, and the lid of the purifier is then let down,

* At the Equitable Gas-works, for instance, the processes of gas-making are gone through, not merely without annoyance to the neighbourhood, but almost without any perceptible odour in any part of the premises.

making all gas-tight. The gas, turned into the purifier from below, rises through the several layers of oxide, parting with its impurity as it goes. Above the top-most layer an open pipe leads away from the first purifier to the second, where the gas passes through a second series of the oxide-laden floors of lath; and from the second purifier to a third, and from a third, if need be, to a fourth. When the purifying power of the oxide is exhausted it is withdrawn, and is exposed to the action of the atmosphere, by spreading it thinly on the floor of an upper room. No foul smell results from such exposure, as there would be in the case of lime; yet the oxide, from being as black as ink, recovers its bright brown colour by degrees, and recovers also, to a considerable extent, its purifying power. It is but right to state here that lime is still used for the final purifying process, as applied to the best gas—the gas which is made of cannel coal, which is rendered as pure as it is possible to render it, and is supplied to the dwellings of the upper classes.

After passing through the purifiers, with their many strata of iron-oxide, or lime, the gas is so far cleansed that it might be stored for use, and left to get rid of the ammonia which it still contains, by contact with the water in the gasometer. But though the water would absorb the ammonia if the gas were kept long enough, it will not do so very quickly; and hence it becomes necessary to get rid of the ammonia in some other way. This is done most satisfactorily by means of what is called the "scrubber," which is nothing more than a tall tank as big as an average haystack; the tank is filled with lumps of coke, over and through which water is constantly trickling from a perforated tube at the top. The gas, being let in at the bottom of the tank, as it rises meets the descending water, with which every particle of it comes into contact, owing to the extensive surface of the wet coke, and the ammonia is thoroughly taken up by the water, which thus acquires a commercial value.

The manufacture of the gas is completed with its satisfactory purification; but hardly less onerous and responsible is the business of storing it, and of dispensing it to the public.

The gas, after purification, is stored in the large circular gasometers which are such conspicuous objects in every gas-work; but before it is conveyed into them it has to be passed through the station-meter, which registers the quantity of gas made in any given period, from an hour to a month or more, and which, being furnished with dial-plates and moving indexes, shows the rate at which gas is being made at all hours of the day and night throughout the year. At those establishments where two different qualities of gas are made, there must be of course two station-meters, as well as two lines of street mains.

The gasometer has not only to store up the gas as fast as it is made, but to weigh upon it with sufficient pressure to force it along the street pipes, so that it may issue from the jets at a uniform rate and burn with a steady flame. The gasometer is a large cylinder, sometimes of enormous dimensions, formed of iron plates riveted together and strengthened with internal rods and bars, and closed at the top, while it hangs or floats with its open end in a cistern of water just large enough to receive it. Whatever the size of the cylinder, its form is invariably the same, its height being just one half its diameter, such being the form which gives the greatest capacity; in practice, however, a little is added to the height, to prevent the escape of gas when the cylinder rises to its greatest elevation in the water.

Years ago it was rare to see a gasometer more than forty or fifty feet in diameter, and we remember when the erection of one of sixty feet was recorded as a triumph; at the present time there are cylinders of a hundred and fifty feet diameter, and more than that—the largest containing over half a million of cubic feet of gas when full.

The gas enters the gasometer through a pipe leading from the purifiers, and rising centrally above the water in the tank. As it comes in it forces up the cylinder, which continues to rise slowly, in spite of its vast weight, forced up by the elastic power of the gas, which in many cases is fanned onwards from the purifiers by a steam-engine. Close to the pipe through which the gas enters is another pipe of about the same diameter, connected with the street mains, and along which, urged by the pressure of the mass of the cylinder, it rushes with a force which can be regulated by increasing or diminishing the superincumbent weight, but which must be sufficient to propel it through the smallest pipes at the greatest distance it has to travel. Ingenious contrivances are had recourse to in order to maintain a uniform pressure—not an easy thing when we reflect that, as the gas becomes exhausted, the gas-holder, by dipping into the water, must part with some considerable portion of its propelling weight at the very time when it is most wanted. In the case of very large gas-holders this business is managed much more easily than in the case of smaller ones—it being possible, by a careful adjustment of weight and bulk, to make them self-regulating.

The large consumption of gas in London necessitates the keeping of an immense store on hand; and, at the same time, the dearth of land renders the multiplication of gasometers expensive, and, in confined areas, impossible. To meet this difficulty, gasometers are often constructed on the telescopic principle. The telescope-gasometer consists of two, three, or more concentric cylinders, the bottoms and tops of which, except the top of the uppermost, are furnished with flanges turned in opposite directions, the flange turning outwards and upwards at the bottom, and inwards and downwards at the top. The uppermost cylinder is covered at the top, but the others are open both at top and bottom. Supposing the gasometer to be empty, all the cylinders will be sunk in the cistern, like the tubes of a telescope in its case; when the gas is introduced, the innermost cylinder will rise first, and when its bottom reaches nearly to the surface of the water, its curved flange lays hold of the flange of the next cylinder, which also rises; and when this has advanced sufficiently high, it lifts the next. The escape of gas and the admission of air are prevented by the lower flange of each cylinder taking up a quantity of water, which acts as a water-lute. By means of this bold and ingenious contrivance, it is evident that two, three, or more gasometers are made to occupy but the area of one.

We need not follow the gas after it leaves the gasometer on its devious journey through the streets and far-stretching suburbs. The means and the methods of its distribution are well known, and need not be here described. We may conclude this brief sketch with one or two items of a statistical kind.

In burning coal for making gas, the quantity of gas produced varies greatly with the description of coal used, the coal from some districts yielding twice as much gas as that from others. Taking the average of the coal used in London, we are quite within the mark in stating that each ton produces ten thousand cubic feet of gas. The other saleable products are fifteen hundred pounds of coke and twelve gallons of tar, not to mention the

ammoniacal liquor. Of the coke, about one-fourth is used for heating the retorts, the remaining three-fourths being sold, and contributing, by its sale, very largely to the profits of the trade. From the tar various products are obtained by distillation. Considering the price we pay for gas, and connecting that with the value of the secondary products, it would appear that the profits of gas-making must be abnormally large; but, on the other hand, we must take into account the cost of production, represented not so much by the price of coal and the wages of the workers, as by the enormous capital invested in the necessary plant, and buried for the most part in the ground. The gas mains of the various London companies at the present time, taken in the aggregate, are not much less than three thousand miles in length. There is hardly any other species of manual industry carried on at so great an outlay.

It would be interesting to know what is the actual quantity of gas produced in London in the course of a year. We have seen no recent estimate, but in 1848 the quantity made was 3,200 millions of cubic feet, and the price paid for it by the public was £700,000. Now it has been stated that the quantity of gas required for the consumption of London doubles every ten years; if this be so, the present rate of production must be more than 12,000 millions of cubic feet per year, and the consumption of coal must amount to 1,200,000 tons. The price paid for the gas would not, however, be proportionately so large, the cost of it to the consumer having been considerably reduced of late years.

SPRING DAYS.*

SPRING days, sweet spring days, my quiet heart and rested eye tell me that there is no fear but that I enjoy you still!

"For lo, the winter is past,
The rain is over and gone:
The flowers appear on the earth;
The time of the singing of birds is come,
And the voice of the turtle is heard in our land."

This exquisite poetry has its voice of delight for me, and as I shut my eyes it brings a change over the bare boughs and the winter land. I dream of the chill black hedges and trees, flushing first into redness, and then "a million emeralds burst from the ruby buds." I dream of the birds coming back, one after one, until the poetry of the flowers is all set to music. And I go out into the land to behold, not only to dream of and image, these things. I watch for the delicious green, tasselling the earliest larch (there is one every year a fortnight in advance of the others) in the clump of those trees beside the road on my way home. I look, in a warm patch that I know, for the first primroses, and when I find them mildly and quietly gazing up at me from the moss, and ivy and broken sticks, and dead leaves, a surprise, although I was expecting them, and a dim reflection of that old child-joy bring with a rush to my heart again those "thoughts that do often lie too deep for tears." And in the garden I wander through the bare shrubberies, varied with bright box, and gather in my harvest there. The little Queen Elizabeth acornites, gold-crowned in their wide-frilled green collars; these are no more scant, and just breaking with bent head through cracking frosty ground. They have carpeted the brown beds, and are even waxing old and past

* From "The Harvest of a Quiet Eye; Leisure Thoughts for Busy Lives." Published by the Religious Tract Society. A book of which Mr. Ruskin says, "I never saw anything more gracefully and rightly done—more harmoniously pleasant in text and illustration."

now. The snowdrops have but left a straggler here and there; and the miniature golden volcano of the crocus has spent its columns of fire. The hazels are draped with slender, drooping catkins; the sweetbriar is letting the soft sweet-breathed leaves here and there out of the clenched hand of the bud. The cherry-tree is preparing to dress itself almost in angels' clothing, white and glistening, and delicious with all soft recesses of clear grey shadow, seen against the mild blue sky. The long branches of the horse-chestnut trees, laid low upon the lawn, are lighting up all over with the ravishing crumpled emerald that bursts like light out of the brown sticky bud; as sometimes holy heavenly thoughts may come from one whose first look we disliked; or as God's dear lessons unfold out of the dark sheath of trouble. The fairy almond-tree—of so tender a hue that you might fantastically imagine it a cherry-tree blushing—casts a light scarf over a dark corner of the shrubbery. The laburnum is preparing for the summer, and is all hung with tiny green festoons. Against the blue sky, on a bare sycamore branch, that stretches out straight from the trunk, a glad-voiced thrush seems thanking God that the spring days are come. Wedged tight into three branching boughs, near the stem of a box-tree, I find a warm secure nest, filled with five little blue-green eggs. It is still a delight to me to find a nest; a delight, if not now a rapture, an intoxication.

All these I see on one spring day or another, as I walk into my garden, or out into the changing lanes. All these I see, and all these I love. But I see them, and I love them tenderly and quietly, not with the wonder and the glee of life's early spring days. I am sad, partly because I know that a great deal of that old wondering ecstatic thrill has gone.

"The rainbow comes and goes
And lovely is the rose,
The moon doth with delight
Look round her when the heavens are bare;
Waters on a starry night
Are beautiful and fair;
The sunshine is a glorious birth;
But yet I know, where'er I go,
That there hath passed away a glory from the earth."

It must be so, naturally, if only from the mere fact that things must lose their newness, and so their wonder, to the eye and the heart. Do what you will, you must become accustomed to things. And the scent of a hyacinth or of the may will cease when familiar to be the wonderful enchanting things that childhood held them to be. And the *thirtieth* time that we see, to notice, the first snowdrop bursting through the pale green sheath above the brown bed, is a different thing from the *third* time. We appreciate delights keenly when we are young, seek the same in later years, but never find them; and then all our life remember the search more or less regretfully. So Wordsworth, the old man, addresses the cuckoo that brought back his young days and his young thoughts by its magic voice:—

"Thou bringest unto me a tale
Of visionary hours.
"Thrice welcome, darling of the Spring!
Even yet thou art to me
No bird, but an invisible thing,
A voice, a mystery:
"To seek thee did I often rove
Through woods and on the green;
And thou wert still a hope, a love;
Still longed for, never seen.
"And I can listen to thee yet;
Can lie upon the plain
And listen, till I do forget
That golden time again."

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